

IN THE CLAIMS:

Please amend Claims 16, 18 and 21-23 and add new Claims 24-27 as follows.

Claims 1-15. (Cancelled).

16. (Currently Amended) A color-information processing method for displaying a three-dimensional object of color distribution based on sample points, said method comprising:

a color-distribution-information input step, of inputting color coordinate values in a second color system corresponding to sample points in a first color system;
a viewpoint information setting step, of setting a viewpoint information according to a user instruction;

a range setting step, of setting a range to be displayed according to a user instruction;

~~a user's-instruction input step, of inputting a user instruction relating to an operation of generating a three-dimensional object;~~

a step of selecting sample points ~~in accordance with~~ corresponding to said range ~~user instruction~~ from the sample points in the first color system and obtaining the color coordinate values in the second color system corresponding to said selected sample points;

a generation step of generating surface information of the three-dimensional object based on the obtained color coordinate values in the second color system and

generating color information of the surface of the three-dimensional object based on the obtained color coordinate values in the second color system; and

a display step of displaying the three-dimensional object of the color distribution based on said surface information of the three-dimensional-object and the color information of the surface.

17. (Previously Presented) A method according to Claim 16, wherein the sample points are regularly placed in the form of a grid in the first color system.

18. (Currently Amended) A method according to Claim 16, wherein said ~~user's-instruction input step~~ range setting step of ~~inputting~~ setting grid ranges for each color component in the first color system ~~and said generation step of generating the surface information of the three-dimensional object is based on the obtained color coordinates of the sample points within the grid ranges.~~

Claims 19 and 20. (Cancelled).

21. (Currently Amended) A computer-readable medium encoded with a computer program for executing a color-information processing method for displaying a three-dimensional object of color distribution based on sample points, said program comprising:

a color-distribution-information input step, of inputting color coordinate values in a second color system corresponding to sample points in a first color system;

a viewpoint information setting step, of setting a viewpoint information according to a user instruction;

a range setting step, of setting a range to be displayed according to a user instruction;

~~a user's-instruction input step, of inputting a user instruction relating to an operation of generating a three-dimensional object;~~

a step of selecting sample points ~~in accordance with~~ corresponding to said ~~user instruction~~ range from the sample points in the first color system and obtaining the color coordinate values in the second color system corresponding to said selected sample points;

a generation step of generating surface information of the three-dimensional object based on the obtained color coordinate values in the second color system and generating color information of the surface of the three-dimensional object based on the obtained color coordinate values in the second color system; and

a display step of displaying the three-dimensional object of the color distribution based on said surface information of the three-dimensional object and the color information of the surface.

22. (Currently Amended) An apparatus for processing color-information for displaying a three-dimensional object of color distribution based on sample points, comprising:

color-distribution-information means for inputting color coordinate values in a second color system corresponding to sample points in a first color system;

viewpoint information setting means for setting a viewpoint information according to a user instruction;

range setting means for setting a range to be displayed according to a user instruction;

~~means for inputting a user instruction relating to an operation of generating a three-dimensional object;~~

a selector to select sample points ~~in accordance with~~ correspond to the ~~user instruction~~ range from the sample points in the first color system and to obtain the color coordinate values in the second color system corresponding to the selected sample points;

a generator for generating surface information of the three-dimensional object based on the obtained color coordinate values in the second color system and generating color information of the surface of the three-dimensional object based on the obtained color coordinate values in the second color system; and

a display to display the three-dimensional object of the color distribution based on the surface information of the three-dimensional object and the color information of the surface.

23. (Currently Amended) An apparatus for processing color-information for displaying a three-dimensional object of color distribution based on sample points, comprising:

- a color-distribution-information device to input color coordinate values in a second color system corresponding to sample points in a first color system;
- a viewpoint information setting device to set a viewpoint information according to a user instruction;
- a range setting device to set a range to be displayed according to a user instruction;
- ~~an input device to input a user instruction relating to an operation of generating a three-dimensional object;~~
- a selector to select sample points ~~in accordance with~~ corresponding to the user instruction range from the sample points in the first color system and to obtain the color coordinate values in the second color system corresponding to the selected sample points;
- a generator for generating surface information of the three-dimensional object based on the obtained color coordinate values in the second color system and generating color information of the surface of the three-dimensional object based on the obtained color coordinate values in the second color system; and
- a display to display the three-dimensional object of the color distribution based on the surface information of the three-dimensional object and the color information of the surface.

24. (New) A method according to Claim 16, wherein the surface information includes a display mode, the number of surfaces and a plurality of compositional data.

25. (New) A method according to Claim 16, wherein said display step performs pseudo-three-dimensional display of the three-dimensional object of the color distribution.

26. (New) A method according to Claim 17, wherein said range setting step sets an internal layer to be displayed.

27. (New) A method according to Claim 17, wherein said three-dimensional object consists of triangles, which are selected from two combinations of triangles considered to be contained in a minimum quadrangle formed by the grids such that a volume of said three-dimensional object is increased in size.